AMENDMENTS

Please amend the application as follows as indicted hereafter:

In the Claims:

Please amend the following claims.

1. (Currently Amended) A device testing system comprising;

automated test equipment (ATE) configured to interface to a device under test (DUT); and

logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of DUT parameter values, the logic further configured to select a subset of the plurality of test pairs from the test set of data and to test the DUT via the ATE with a portion of the selected subset, the logic further configured to interpolate at least one other test result value corresponding to another test pair in the portion based upon a test result of at least one of the test pairs.

2. (Original) The system of claim 1, wherein the test set of data comprises test pairs indicative of operational parameters corresponding to the DUT.

3. (Original) The system of claim 2, wherein the subset of test pairs selected from the test set of test pairs is a cross shmoo.

4. (Cancelled).

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5. (Currently Amended) The system of claim 4~~2~~0, wherein the logic is further configured to calculate the transition point between the first and second endpoint by performing a binary search.

6. (Original) The system of claim 5, wherein the logic is further configured to determine a second transition point corresponding to the second leg, a third transition point corresponding to the third leg, and a fourth transition point corresponding to the fourth leg.

7. (Original) The system of claim 6, wherein the logic is further configured to predict a plurality of undetermined test results corresponding to at least a portion of the plurality of test pairs of the test set.

8. (Currently Amended) A device testing method, comprising the steps of:

selecting a test set of data comprising a plurality of test pairs, the test pairs indicative of device-under-test parameter values;

selecting a subset of test pairs from the plurality of test pairs; ~~and~~

testing the device-under-test via automated test equipment with a portion of the selected subset; and

interpolating at least one other test result value corresponding to another test pair in the portion based upon a test result of at least one of the test pairs.

9. (Original) The method of claim 8, wherein the test set of data comprises test pairs indicative of operational parameters corresponding to the device-under-test.

10. (Original) The method of claim 9, wherein the subset of test pairs selected from the test set of test pairs is a cross shmoo.

11. (Original) The method of claim 10, wherein the cross shmoo comprises a first leg, a second leg, a third leg, and a fourth leg.

12. (Cancelled).

13. (Currently Amended) The method of claim ~~12~~21, wherein the calculating step further comprises the step of performing a binary search to determine the first transition point between the first and second endpoints.

14. (Original) The method of claim 13, further comprising the steps of:

determining a second transition point between the first endpoint of the second leg and the second endpoint of the second leg;

determining a third transition point between the first endpoint of the third leg and the second endpoint of the third leg; and

determining a fourth transition point between the first endpoint of the fourth leg and the second endpoint of the fourth leg.

15. (Original) The method of claim 14, further comprising the step of predicting a portion of the test results for the plurality of test pairs within the test set based upon the first, second, third and fourth transition points.

16. (Original) The method of claim 15, wherein the predicting step comprises interpolating the transition points over the test set.

17. (Original) A device testing system, comprising:

automated testing equipment (ATE) interfaced to a device-under-test (DUT);

means for selecting a subset of a test set of test pairs for transmitting to the ATE for testing of the DUT;

means for testing the DUT with a portion of the subset of test pairs; and

means for predicting the test results for the test set of test pairs based upon a subset of test results obtained from testing a portion of the subset.

18. (Currently Amended) A computer program for testing a device, the computer program being embodied on a computer-readable medium, the program comprising:

logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of device-under-test parameter values;

logic configured to select a subset of test pairs from the plurality of test pairs; and

logic configured to test the device-under-test via the automated testing equipment with a portion of the selected subset; and

logic configured to interpolate at least one test result value of one other test pair in the portion based upon the test results of at least one of the test pairs.

19. (Original) The computer program of claim 18, further comprising:

logic configured to predict test results for a portion of the plurality of test pairs of the test set; and

logic configured to display a plot indicative of the test results obtained by the logic configured to test and the logic configured to predict.

20. (New) A device testing system comprising;

automated test equipment (ATE) configured to interface to a device under test (DUT); and

logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of operational parameters corresponding to the DUT, the logic further configured to select a subset in the shape of a cross shmoo of the plurality of test pairs from the test set of data and to test the DUT via the ATE with a portion of the selected subset based upon a test result of at least one of the test pairs,

wherein the cross shmoo comprises a first leg, a second leg, a third leg, and a fourth leg, and wherein the logic is further configured to determine a first test result indicative of a first endpoint of the first leg and a second test result indicative of a second endpoint opposite the first endpoint, the logic further configured to calculate a transition point between the first endpoint and the second endpoint if the first test result and the second test result exhibit different values.

21. (New) A device testing method, comprising the steps of:

selecting a test set of data comprising a plurality of test pairs, the test pairs indicative of operational parameters corresponding to a device-under-test;

selecting a subset of test pairs from the plurality of test pairs, the subset of test pairs forming a cross shmoo and comprising a first leg, a second leg, a third leg, and a fourth leg;

testing the device-under-test via automated test equipment with a portion of the selected subset based upon a test result of at least one of the test pair; determining a first test result indicative of a first endpoint of the first leg and a second test result indicative of a second endpoint opposite the first endpoint; and

calculating a first transition point between the first endpoint and the second endpoint if the first test result and the second test result exhibit different values.